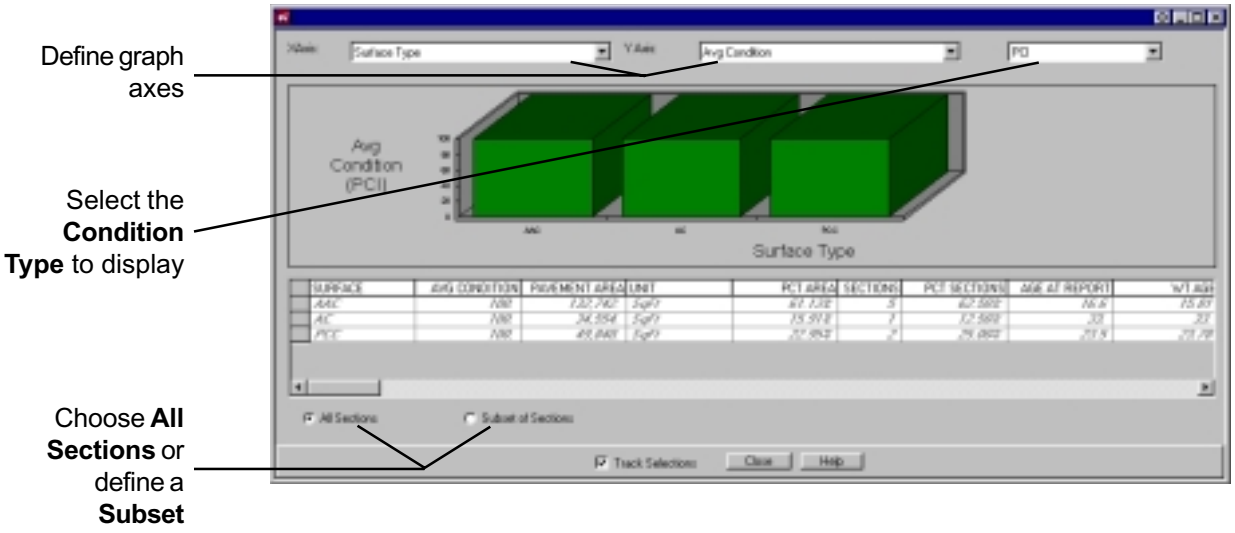
Reports

Summary Charts

Summary Charts is a feature designed to allow you to graph, and compare any two attributes of a database. For example, you can view the average condition of your network based on surface type. To access the **Inventory Summary Charts**, select the **Visual Menu** button from the **PAVER Button Bar** and choose **Reports** and then **Summary Charts**. At this point, the **Summary Charts** window appears and awaits your selection of a category to represent the X and Y axis. Using the drop-down boxes labeled **X Axis** and **Y Axis**, select an **X Axis** for the graph you wish to produce. The drop-down box for **Y Axis** selections is hidden until you make your selection for the X axis. The third drop-down box requests that you make a selection of which condition index you wish to use. Remember, for the charts to work properly, you must have condition data available for the index you have selected. PAVER automatically associates a PCI with every section in your database. Every other index requires that you either input the value manually or establish a definition for the index (discussed in detail under **User-Defined Indices**).



After you have made valid selections (some combinations may produce a null set of sections and hence no graph), the graph and data table below populate. For the table at the bottom of the page, dragging the border with the mouse can modify the field widths. A right mouse click on the table Produces the **Print**, **Export**, and other options for the table.

Standard Reports

There are four **Standard Reports**: **Branch Listing**, **Work History**, **Branch Condition**, and **Section Condition Reports**. These reports are accessed through the **Visual Menu** via the **Reports** option.

A brief description of each of the four **Standard Reports** is as follows:

• **Branch Listing Report** – This report produces a list of all branches and relevant information on each including usage, number of sections, total area, etc. The last page is a summary of all branches in the network (or networks).

• **Work History Report** – This produces a section by section report of all work completed within that section over the life of the database. Data such as work type, work date, and cost are included.

• **Branch Condition Report** – This is a display of the average and weighted average condition of each branch. Standard deviations are included, and a summary of all branches is included on the last page.

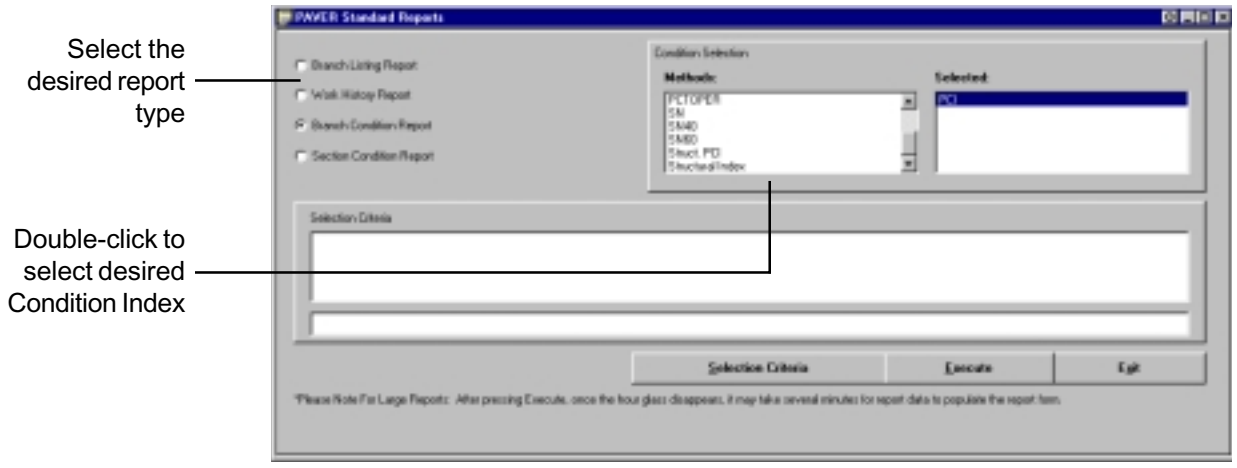
• **Section Condition Report** – This is the same as the branch condition report only the data is displayed at the section level. Again, a summary is included on the last page.

Note

For **Standard Reports** there is no **Order Rows** tab in the **EMS Query Tool** since reports are created in a standard layout.

The starting point for each of these reports is the same. Define the subset of the database you wish to run the report on by clicking on the **Selection Criteria** button. The subset can range from one section to the entire database which is the default if you do not establish **Selection Criteria**. Clicking on the **Selection Criteria** button opens the **EMS Query Tool**. Use of the **EMS Query Tool** has been discussed in previous sections.

When running the **Branch** and **Section Condition Reports**, one additional piece of information is required. Before the report can be executed, you must select which condition index is to be used. This is done by double-clicking on the desired condition in the **Condition Selection** box under **Methods**. This places that condition type in the **Selected** window, at which point you can proceed with the query or execution of the report. To deselect an item in the **Selected** box, double-click on it to send it back to the **Methods** box. Only one condition index can be used per report.



On the top of each of the reports is a tool bar, used to manipulate the report. Left and right arrow buttons are used to go forward and backward through the report. In between the arrows is a display of the current page and the total number of pages in the report. There is a print button and an export button to send the report to a printer or to a file for further manipulation. Finally, a **View Size** drop-down box allows you to size the report for ease of viewing.

Re-Inspection Report

The **Re-Inspection report** is designed to produce a listing of information about the last inspection for each section included in the report. The **Re-Inspection** window offers several options for configuring the report:

• **Distress Details** – This section gives you the option to display recorded distress information from the last inspection in three levels of detail (Remember: distresses are entered at the sample level and are associated with a specific inspection date.):

• **None** – No distress details shown.

• **Summary** – Distress code and severity level of each distress in the sample unit are shown.

• **Detail** – Complete details for every distress listed in the current sample are shown.

• **Calculate Sample PCI** – This produces a PCI for each sample listed. Although Paver works with Section level PCI's throughout the program, this shows the PCI of each inspected sample.

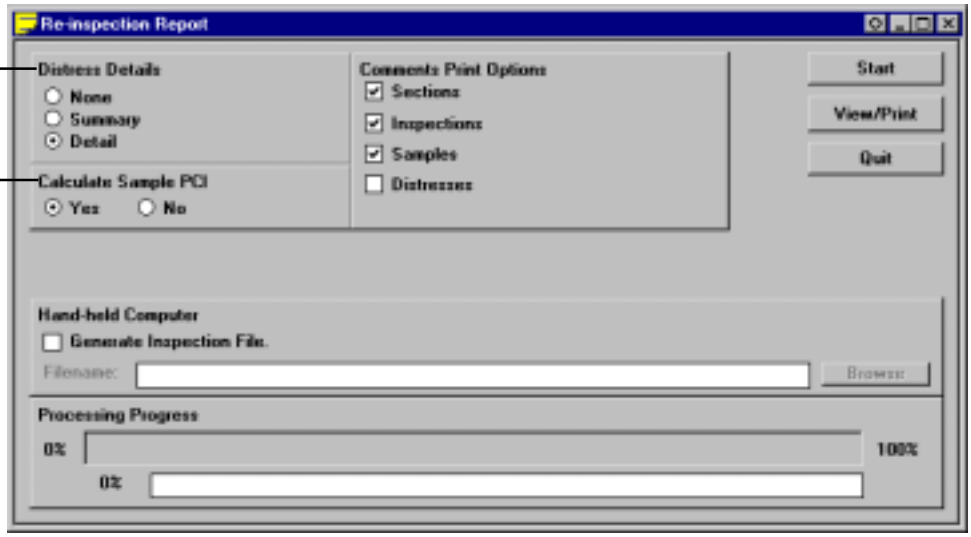
• **Report Sample Ordering** – This gives you control over how the re-inspection report sorts and orders the samples in each section – numerically or alphanumerically. Your choice is based on how you have chosen to name your samples.

• **Comments Print Options** – Checking any combination of these boxes enables the report to display comments that were entered at that level. Within the program, you can enter comments in a text field, at any of those levels – here is where those comments can be printed out.

• **Hand-Held Computer** – Selecting this option creates a file (extension INP) that can be downloaded to a handheld device for use during the inspection process. This file provides the handheld unit with all information necessary to perform an inspection on a section. To use this feature, select the **Generate Inspection File** box and type the path and name of the file you wish to create (using the INP extension). You can also click on **Browse** and point to the folder you will be storing the inspection file in. You still need to name the file – making sure to add the .INP extension in the name, and click **Open** to place the path and file name in the **File name** box. From here, you will run the re-inspection report as usual and Paver creates the INP file and places it in the path you specified, when the re-inspection report is finished.

Choose **Distress Details** to display

Select to include a PCI value for each sample



Now that you have configured your report, clicking the **Start** button creates the report. The next thing you see is the **EMS Query Tool**. At this point, you can select the whole database, or specific sections to be included into the report. When you say **OK** to the **Query Tool** (Saying **OK** to an empty query selects the entire database) the re-inspection report executes. When the progress bar indicates that the report is complete, clicking on **View/Print** displays the report. From this screen, you can view the contents, print the report, or export to a file or application. If you want to change any of the report parameters, simply close the view window, make the appropriate changes on the configuration screen, and select the **Restart** button.

User-Defined Report

The user-defined reporting tool gives you the ability to create your own report. The results of the report are displayed in table form that can then be printed or exported to another application (such as Microsoft Excel). As with other tables in PAVER, right click on the table to access the print and export options menu.

Opening the user-defined reporting tool produces the **EMS User-Defined Reporting Tool** window that offers three options: display a **Memorized Report**, **Create New Report**, and **Edit Current Report**.

Display a Memorized Report

This is a report that you have created and saved. It is available from the pick list at the top of the window. This report regenerates each time you select it, so all information displayed is current.

Create New Report

Click on the **Create New Report** button and the **EMS User-Defined Reporting Tool Definition** window appears. On the left side of the definition window, there is a tree that reflects your database structure. On the right side, there is a window with three tabs. Use the tree in the left side of the window to select a component of the hierarchy that contains the data elements that you would like displayed in your report. All associated elements are displayed in the left window of the **Select Columns** tab. You can scroll through the various levels of the tree in the left side of the window to see exactly which elements are associated with the different levels of the inventory structure.

Note

Selected Rows determines which records will be included in the table, while **Selected Columns** determines what data from each record is displayed.

In the right side, the first tab, **Select Columns**, requires you to specify the data items that are displayed in each column. Select individual components and move them to the window on the right side. All elements in this window become the column headers for your report. Only the elements you select from the center window and move to the right side are integrated into the report.

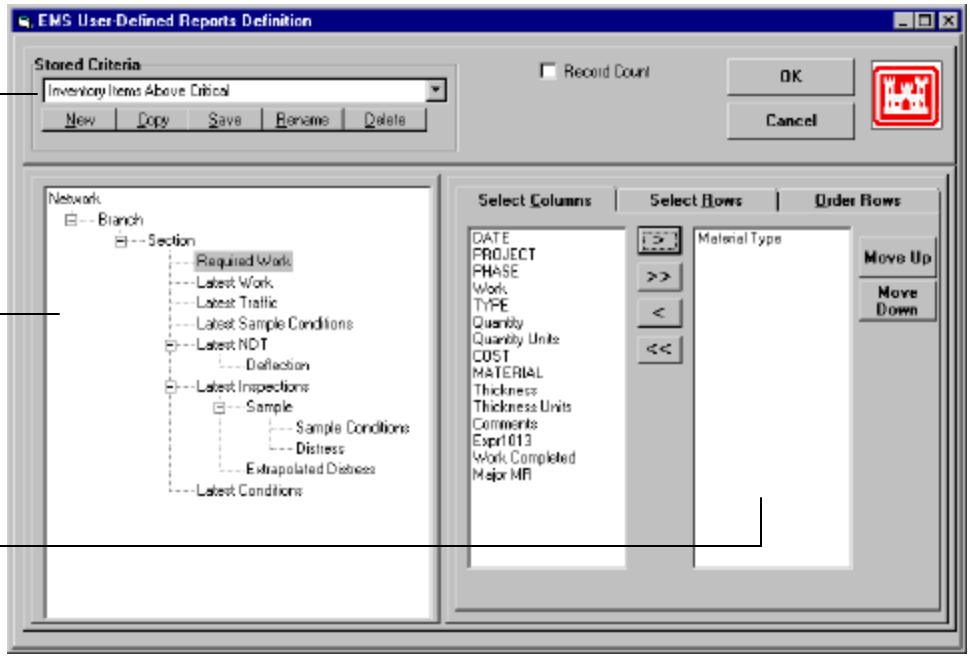
Select Rows invokes the **EMS Query Tool** and allows you to build the selection as you would in any other case that the **Query Tool** is used. Finally, the **Order Rows** tab allows you to order or sort the records in the table.

In between the two windows of the **Selected Columns** tab and the **Order Rows** tab, there are two types of arrows. Double arrows move all items in the window, and single arrows only move the selected item. If you choose to deselect an item, simply move it back to the center box, and it is removed from the list. The **Move Up** and **Move Down** buttons allow you to position the selected components in the desired order. The **Change Order** button, in the **Order Rows** tab, changes between Ascending and Descending orders for the selected components.

Store criteria to be used again as a **Memorized Report** format

Navigate through inventory components for data categories

Columns to be included in the report must be shown here



The **New**, **Copy**, **Save**, **Edit**, and **Delete** buttons, located in the top left of the window, become available to perform the corresponding actions as the circumstances allow. Previously saved formats are listed in the **Stored Criteria** drop down list.

Edit Current Report

The first step to editing a report is to select the desired report from the drop-down box at the top of the **Edit** window. From here, all of the same options from **Create New Report** are available. When the editing is complete, the changes take effect immediately and are reflected the next time the report is run.

To **Run** a report, simply select the report from the drop list at the **EMS User-Defined Reporting Tool** window, and the populated table appears. The report generates at the moment of selection so all data is current.

GIS Reports

The **GIS Reports** are a series of preset views that allow you to see a variety of information about your database in a graphical display. They are only available if you have a map linked to your database (see the GIS section for details on linking). The views are grouped into 2 sections: **Last PCI** and **General Info**.

To navigate these views, use the **GIS Viewer Buttons**. They function in the following manner:

- **Center** – Centers the current view at full extent
- **Pan** – Allows you to move around the view at the current zoom level
- **Select** – Activates the selector tool so you can use the GIS view as an inventory selector (See the section on "Selectors")
- **Zoom Area** – Allows you to block portion of the view to zoom in on
- **Zoom In** – Zooms in one level on the entire view
- **Zoom Out** – Zooms out one level on the entire view
- **Print** – Prints a copy of the view and the categories with color codes

Last PCI

This view displays the current/latest PCI value for each section in the view. This PCI value comes from the last inspection date (or last major M&R activity date). Going to **Tables** from the menu bar, and selecting **Condition Tools** and **Define Condition and Age Categories** can define the categories and values, as well as associated graph colors. In this table, on the **Condition Categories** tab, select **PCI** in the **Name** drop-down box, and you can make new categories, change names, assign numeric ranges, and manipulate color schemes.

General Info

Unlike the **Last PCI** view, **General Info** actually consists of four separate views:

- **Surface Type**
- **Category**
- **Rank**
- **Branch Use**

The categories and associated color schemes in these views are preset and cannot be changed. Since the **General Info** window has four views, only the *top, checked* view will be displayed. Each view name has a check box next to it. If only one box is checked, then only that view displays. If more than one view is checked, the view that is highest in location on the list displays. The up and down arrows under the views box can be used to move views up or down on the list. Highlight a view and use the arrows to move it to a different location on the list.

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